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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,127	01/08/2002	Matt Richard Hogstrom	RSW920010133US1	4519
7590	11/03/2004		EXAMINER	
A. Bruce Clay IBM Corporation T81/503 PO Box 12195 Research Triangle Park, NC 27709			RAMPURJA, SATISH	
			ART UNIT	PAPER NUMBER
			2124	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/041,127	HOGSTROM ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Satish S. Rampuria	2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 08 January 2002.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-22 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-22 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/08/02.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_ .

***DETAILED ACTION***

1. This action is in response to the application filed on 10/08/2002.
2. Claims 1-22 are pending.

***Information Disclosure Statement***

3. An initialed and dated copy of Applicant's IDS form 1449 filed on 10/08/2002 is attached to the instant Office action.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-7 and 8-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are non-statutory because they recite software components for loading/invoking the class/object, representing functional descriptive material without a computer readable medium or computer implemented, program per se are not tangibly embodied. Claims 1-10 thus amounts to only abstract idea and are nonstatutory.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-13 and 16-22 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,438,560 to Loen (hereinafter called Loen).

**Per claims 1 and 2:**

Loen disclose:

- loading a class (fig. 2, element 42 and related discussion);
- inserting an immutability flag into the class (col. 6, line 16 “a particular field or flag defined for the object”);
- determining whether the class is immutable (col. 2, lines 61-63 “determination is made as to whether a matching immutable object... has redundant content... requested immutable object”); and
- setting the immutability flag if the class is immutable (col. 6, lines 14-16 “Routine 50... determining first whether the object is immutable... based upon a particular field or flag”).

**Per claim 3:**

The rejection of claim 2 is incorporated, and further, Loen disclose:

- determining whether the class can be modified after it is created col. 2, lines 61-63 “determination is made as to whether a matching immutable object... has redundant content... requested immutable object”).

**Per claim 6:**

The rejection of claim 1 is incorporated, and further, Loen disclose:

- receiving a request (col. 2, line 55 “processing a request”) to invoke a server application (col. 5, lines 8-11 “various applications... execute.. in a distributed or client-server”);
- examining an argument in the request (col. 6, lines 17 “analyzing the context in which an object is created”);
- if the argument is an object, determining whether the object is immutable (col. 6, lines 14-15 “Routine 50... determining first whether the object is immutable); and
- if the object is immutable, passing a reference to the object rather than a clone of the object (col. 5, lines 64-66 “a request to create an immutable object expects the return of a "reference", or pointer, to an immutable object containing the desired data”).

**Per claim 7:**

The rejection of claim 6 is incorporated, and further, Loen disclose:

- determining whether an immutability flag for the object is set (col. 6, lines 14-16 “Routine 50... determining first whether the object is immutable... based upon a particular field or flag”).

**Per claims 8 and 10:**

- receiving a request (col. 2, line 55 "processing a request") to invoke a server application (col. 5, lines 8-11 "various applications... execute.. in a distributed or client-server");
- examining an argument in the request (col. 6, lines 17 "analyzing the context in which an object is created");
- if the argument is an object, determining whether the object is immutable (col. 6, lines 14-15 "Routine 50... determining first whether the object is immutable); and
- if the object is immutable, passing a reference to the object rather than a clone of the object (col. 5, lines 64-66 "a request to create an immutable object expects the return of a "reference", or pointer, to an immutable object containing the desired data").

**Per claim 9:**

The rejection of claim 8 is incorporated, and further, Loen disclose:

- determining whether an immutability flag for the object is set (col. 6, lines 14-16 "Routine 50... determining first whether the object is immutable... based upon a particular field or flag").

***Claims 11-13 and 16-17*** are the apparatus claims corresponding to method claims 1-3 and 6-7 respectively, and rejected under the same rational set forth in connection with the rejection of claims 1-3 and 6-7 respectively, above.

***Claims 18-20*** are the apparatus claims corresponding to method claims 6, 7, and 10 respectively, and rejected under the same rational set forth in connection with the rejection of claims 6, 7, and 10 respectively, above.

***Claims 21-22*** are the computer product claims corresponding to method claims 1 and 6 respectively, and rejected under the same rational set forth in connection with the rejection of claims 1 and 6 respectively, above.

Substantially as claimed.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4, 5, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loen in view of US Publication No. 2002/0016864 to Brett (hereinafter called Brett).

**Per claims 4 and 5:**

Loen does not explicitly disclose whether the class can be modified comprises determining whether all properties of the object are marked private and whether the class can be modified comprises determining whether there are any non-private methods that update properties of the class.

However, Brett discloses in an analogous computer system whether the class can be modified comprises determining whether all properties of the object are marked private (page 1, paragraph 4 "functions are considered "private" or for use by only the object itself") and whether the class can be modified comprises determining whether there are any non-private methods that update properties of the class (page 1, paragraph 4 "functions can be declared "public" or available for use externally of the object").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of having private and non-private or public variable within the class as taught by Brett into the method of reuse of immutable object at the run time as taught by Loen. The modification would be obvious because of one of ordinary skill in the art would be motivated to use private and/or public variables within the class to keep the data private and/or public in conversion for classes as suggested by Brett (page 3, paragraph 18).

*Claims 14-15* are the apparatus claims corresponding to method claims 4 and 5 respectively, and rejected under the same rational set forth in connection with the rejection of claims 4 and 5 respectively, above.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Satish S. Rampuria** whose telephone number is **571-272-3732**. The examiner can normally be reached on **9:00 am to 6:30 pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Kakali Chaki** can be reached on **571-272-3719**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satish S. Rampuria  
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11/01/2004

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